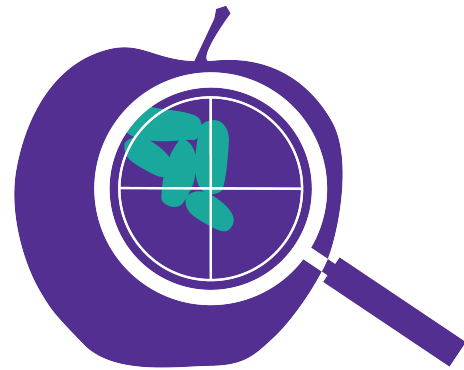


Interested?
Here are some
cool resources.

- igem.org
- MIT opencourseware:
Introduction to
Biological Engineering
Design
- Edx: Principles of
Synthetic Biology

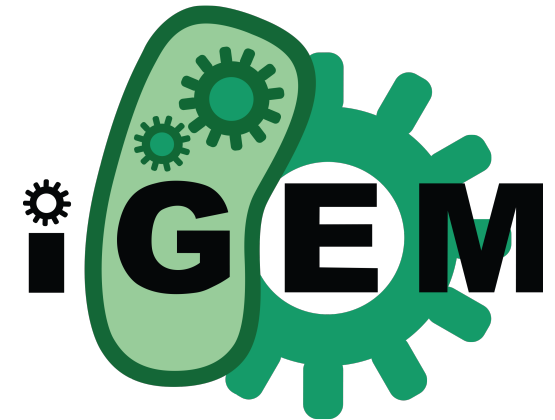


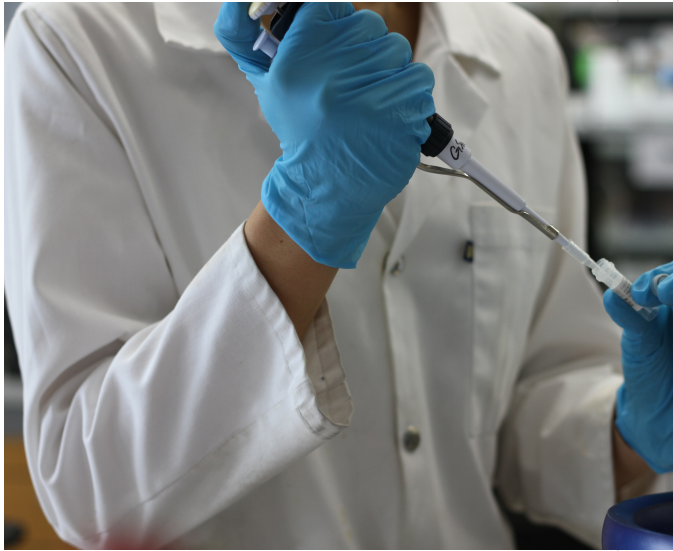
NYUAD iGEM 2016



iGEM 101

By Team Ain Shams Egypt &
Team NYUAD





What is iGEM?

The iGEM (International Genetically Engineered Machine) foundation aims to support the education and advancement of synthetic biology, promoting collaboration as well as developing a community for those interested in the field.

What is synthetic biology?

- Biology + Engineering
- Design and assemble biological parts to make machines, modules, systems, etc.
- New, emerging scientific field
- Incorporates artificial design of living organisms for industry & research
- Based on DNA sequencing and synthesis to create organisms that serve a specific function

What is the iGEM competition?

The iGEM Competition is an event that brings together teams of high school and university students to work on projects using synthetic biology. Every year, hundreds of teams from all over the world work for several months to develop projects that use synthetic biology as a tool to create a positive impact in their communities.

Applications of synthetic biology!

Synthetic biology can be utilized to develop solutions to many problems that face us in the Middle East. From air pollution and agriculture to diagnostics and therapeutics, the options are endless.

Our work this year:

In many developing countries, street food contamination of the Shiga toxin-producing *E. coli* is a big issue, but currently, there is no detection method for the Shiga-like toxin outside of a lab setting. The iGEM Team NYU-AD 2016 worked to create a device that street vendors and restaurants could use to detect Shiga-like toxins in foods and determine the food's safety.

Ain-Shams_Egypt 2016 project is to develop a therapeutic drug for liver cancer, a major health problem with high prevalence in the Middle East. Using synthetic biology principles, the team can design a sensitive synthetic circuit that can work only in liver cancer sparing healthy tissues.